Amendments to the Claims:

Please cancel claims 1-48, 50-55, 64-65 and 73-74 without prejudice.

Please add new claims 75-86.

Please amend claims 49, 56-62 and 68-72 as follows:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claims 1-48 **(Cancelled)**

49. **(Currently amended)** A method for diagnosing colon, stomach or prostate cancer comprising: a) determining the expression of ~~one or more genes~~ a gene comprising or encoding a nucleic acid sequence selected from the group consisting of ~~SEQ ID NO:606, SEQ ID NO: 4, SEQ ID NO:10, SEQ ID NO:26, SEQ ID NO:32, SEQ ID NO:40, SEQ ID NO:46, SEQ ID NO:54, SEQ ID NO:60, SEQ ID NO:68, SEQ ID NO:76, SEQ ID NO:86, SEQ ID NO:96, SEQ ID NO:102, SEQ ID NO:114, SEQ ID NO:122, SEQ ID NO:128, SEQ ID NO:140, SEQ ID NO:143, SEQ ID NO:149, SEQ ID NO:159, SEQ ID NO:165, SEQ ID NO:183, SEQ ID NO:191, SEQ ID NO:199, SEQ ID NO:205, SEQ ID NO:211, SEQ ID NO:219, SEQ ID NO:225, SEQ ID NO:231, SEQ ID NO:242, SEQ ID NO:248, SEQ ID NO:254, SEQ ID NO:266, SEQ ID NO:272, SEQ ID NO:278, SEQ ID NO:284, SEQ ID NO:290, SEQ ID NO:296, SEQ ID NO:308, SEQ ID NO:314, SEQ ID NO:320, SEQ ID NO:328, SEQ ID NO:334, SEQ ID NO:342, SEQ ID NO:350, SEQ ID NO:356, SEQ ID NO:362, SEQ ID NO:368, SEQ ID NO:374, SEQ ID NO:380, SEQ ID NO:390, SEQ ID NO:398, SEQ ID NO:410, SEQ ID NO:416, SEQ ID NO:422, SEQ ID NO:444, SEQ ID NO:450, SEQ ID NO:458, SEQ ID NO:466, SEQ ID NO:474, SEQ ID NO:486, SEQ ID NO:492, SEQ ID NO:500, SEQ ID NO:508, SEQ ID NO:514, SEQ ID NO:520, SEQ ID NO:526, SEQ ID NO:534, SEQ ID NO:540, SEQ ID NO:554, SEQ ID NO:564, SEQ ID NO:570, SEQ ID NO:576, SEQ ID NO:582, SEQ ID NO:588, SEQ ID NO:594, SEQ ID NO:600, SEQ ID NO:612, SEQ ID NO:620, SEQ ID NO:628, SEQ ID NO:634, SEQ ID NO:640, SEQ ID~~

~~NO:648, SEQ ID NO:654, SEQ ID NO:664, SEQ ID NO:672, SEQ ID NO:680, SEQ ID NO:692, SEQ ID NO:698, SEQ ID NO:704, SEQ ID NO:710, SEQ ID NO:716, SEQ ID NO:726, SEQ ID NO:732, SEQ ID NO:735, SEQ ID NO:741, SEQ ID NO:747, SEQ ID NO:753, SEQ ID NO:759, SEQ ID NO:775, SEQ ID NO:781, SEQ ID NO:787, SEQ ID NO:795, SEQ ID NO:801, SEQ ID NO:811, SEQ ID NO:817, SEQ ID NO:823, SEQ ID NO:829, SEQ ID NO:835, SEQ ID NO:841, SEQ ID NO:847, SEQ ID NO:853, SEQ ID NO:859, SEQ ID NO:865, SEQ ID NO:871, SEQ ID NO:877, SEQ ID NO:887, SEQ ID NO:899, SEQ ID NO:905, SEQ ID NO:911, SEQ ID NO:919, SEQ ID NO:925, SEQ ID NO:931, SEQ ID NO:937, SEQ ID NO:945, SEQ ID NO:951, SEQ ID NO:957, SEQ ID NO:963, SEQ ID NO:969, SEQ ID NO:975, SEQ ID NO:607, SEQ ID NO:5, SEQ ID NO:11, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, SEQ ID NO:27, SEQ ID NO:33, SEQ ID NO:35, SEQ ID NO:41, SEQ ID NO:47, SEQ ID NO:49, SEQ ID NO:55, SEQ ID NO:61, SEQ ID NO:63, SEQ ID NO:69, SEQ ID NO:71, SEQ ID NO:77, SEQ ID NO:79, SEQ ID NO:81, SEQ ID NO:87, SEQ ID NO:89, SEQ ID NO:91, SEQ ID NO:97, SEQ ID NO:103, SEQ ID NO:105, SEQ ID NO:107, SEQ ID NO:109, SEQ ID NO:115, SEQ ID NO:117, SEQ ID NO:123, SEQ ID NO:129, SEQ ID NO:131, SEQ ID NO:133, SEQ ID NO:135, SEQ ID NO:141, SEQ ID NO:144,~~

SEQ ID NO:150 , SEQ ID NO:152, and SEQ ID NO:154

~~, SEQ ID NO:160, SEQ ID NO:166, SEQ ID NO:168, SEQ ID NO:170, SEQ ID NO:172, SEQ ID NO:174, SEQ ID NO:176, SEQ ID NO:184, SEQ ID NO:186, SEQ ID NO:192, SEQ ID NO:194, SEQ ID NO:200, SEQ ID NO:206, SEQ ID NO:212, SEQ ID NO:214, SEQ ID NO:220, SEQ ID NO:226, SEQ ID NO:232, SEQ ID NO:234, SEQ ID NO:243, SEQ ID NO:249, SEQ ID NO:255, SEQ ID NO:257, SEQ ID NO:259, SEQ ID NO:267, SEQ ID NO:273, SEQ ID NO:279, SEQ ID NO:285, SEQ ID NO:291, SEQ ID NO:297, SEQ ID NO:299, SEQ ID NO:301, SEQ ID NO:303, SEQ ID NO:309, SEQ ID NO:315, SEQ ID NO:321, SEQ ID NO:323, SEQ ID NO:329, SEQ ID NO:335, SEQ ID NO:337, SEQ ID NO:343, SEQ ID NO:345, SEQ ID NO:351, SEQ ID NO:357, SEQ ID NO:363, SEQ ID NO:369, SEQ ID NO:375, SEQ ID NO:381, SEQ ID NO:383, SEQ ID NO:385, SEQ ID NO:391, SEQ ID NO:393, SEQ ID NO:399, SEQ ID NO:401, SEQ ID NO:403, SEQ ID NO:405, SEQ ID NO:411, SEQ ID NO:417, SEQ ID NO:423, SEQ ID NO:425, SEQ ID~~

~~NO:427, SEQ ID NO:429, SEQ ID NO:431, SEQ ID NO:433, SEQ ID NO:435, SEQ ID NO:437, SEQ ID NO:439, SEQ ID NO:445, SEQ ID NO:451, SEQ ID NO:453, SEQ ID NO:459, SEQ ID NO:461, SEQ ID NO:467, SEQ ID NO:469, SEQ ID NO:475, SEQ ID NO:477, SEQ ID NO:479, SEQ ID NO:481, SEQ ID NO:487, SEQ ID NO:493, SEQ ID NO:495, SEQ ID NO:501, SEQ ID NO:509, SEQ ID NO:515, SEQ ID NO:521, SEQ ID NO:527, SEQ ID NO:529, SEQ ID NO:535, SEQ ID NO:541, SEQ ID NO:543, SEQ ID NO:545, SEQ ID NO:547, SEQ ID NO:549, SEQ ID NO:555, SEQ ID NO:557, SEQ ID NO:559, SEQ ID NO:565, SEQ ID NO:571, SEQ ID NO:577, SEQ ID NO:583, SEQ ID NO:589, SEQ ID NO:595, SEQ ID NO:601, SEQ ID NO:613, SEQ ID NO:615, SEQ ID NO:621, SEQ ID NO:623, SEQ ID NO:629, SEQ ID NO:635, SEQ ID NO:641, SEQ ID NO:643, SEQ ID NO:649, SEQ ID NO:655, SEQ ID NO:657, SEQ ID NO:665, SEQ ID NO:667, SEQ ID NO:673, SEQ ID NO:675, SEQ ID NO:681, SEQ ID NO:683, SEQ ID NO:685, SEQ ID NO:687, SEQ ID NO:693, SEQ ID NO:699, SEQ ID NO:705, SEQ ID NO:711, SEQ ID NO:717, SEQ ID NO:719, SEQ ID NO:721, SEQ ID NO:727, SEQ ID NO:733, SEQ ID NO:736, SEQ ID NO:742, SEQ ID NO:748, SEQ ID NO:754, SEQ ID NO:760, SEQ ID NO:762, SEQ ID NO:764, SEQ ID NO:766, SEQ ID NO:768, SEQ ID NO:770, SEQ ID NO:776, SEQ ID NO:782, SEQ ID NO:788, SEQ ID NO:796, SEQ ID NO:802, SEQ ID NO:804, SEQ ID NO:806, SEQ ID NO:812, SEQ ID NO:818, SEQ ID NO:824, SEQ ID NO:830, SEQ ID NO:836, SEQ ID NO:842, SEQ ID NO:848, SEQ ID NO:854, SEQ ID NO:860, SEQ ID NO:866, SEQ ID NO:872, SEQ ID NO:878, SEQ ID NO:880, SEQ ID NO:882, SEQ ID NO:888, SEQ ID NO:890, SEQ ID NO:892, SEQ ID NO:894, SEQ ID NO:900, SEQ ID NO:906, SEQ ID NO:912, SEQ ID NO:914, SEQ ID NO:920, SEQ ID NO:926, SEQ ID NO:932, SEQ ID NO:938, SEQ ID NO:940, SEQ ID NO:946, SEQ ID NO:952, SEQ ID NO:958, SEQ ID NO:964, SEQ ID NO:970, SEQ ID NO:976, SEQ ID NO:978 and SEQ ID NO:980~~ in a first tissue type of a first individual; and b) comparing said expression of said ~~gene(s)~~ gene from a second normal tissue type from said first individual or a second unaffected individual; wherein a difference in said expression indicates that the first individual has colon, stomach or prostate cancer.

Claims 50-55 **(Cancelled)**

56. **(Currently amended)** A method for diagnosing colon, stomach or prostate cancer comprising comparing a level of proteasome component C7-I mRNA in a patient sample comprising colon, stomach or prostate tissue to the level of the proteasome component C7-I mRNA in a normal control; wherein ~~an increase~~ a difference of at least 50% ~~from~~ between the level in the patient sample relative to the level in the normal control indicates that the patient has or is predisposed to colon, stomach or prostate cancer.

57. **(Currently amended)** The method of claim 56 wherein the proteasome component C7-I mRNA comprises a nucleotide sequence at least 95% identical to SEQ ID NO:152~~, said mRNA encoding a polypeptide with threonine endopeptidase activity~~.

58. **(Currently amended)** The method of claim 56 wherein the proteasome component C7-I mRNA comprises a nucleotide sequence at least 98% identical to SEQ ID NO:152, ~~said mRNA encoding a polypeptide with threonine endopeptidase activity~~.

59. **(Previously presented)** The method of claim 56 wherein the proteasome component C7-I mRNA comprises the nucleotide sequence of SEQ ID NO:152.

60. **(Currently amended)** The method of claim 56 wherein ~~an increase~~ a difference of at least 100% ~~from~~ between the level of the proteasome component C7-I mRNA in the patient sample relative to the normal control indicates that the patient has or is predisposed to colon, stomach or prostate cancer.

61. **(Currently amended)** A method for diagnosing colon, stomach or prostate cancer comprising detecting ~~evidence of~~ differential expression of proteasome component C7-I in a patient sample, wherein ~~evidence of~~ differential expression of proteasome component C7-I indicates that the patient has colon, stomach or prostate cancer.

62. **(Currently amended)** The method of claim 61 wherein ~~evidence of~~ differential expression is detected by measuring the level of a proteasome component C7-I expression product.

63. **(Previously presented)** The method of claim 62 wherein the expression product is a protein or mRNA.

Claims 64-65 **(Cancelled)**

66. **(Previously presented)** The method of claim 62 wherein the level of a proteasome component C7-I expression product in the patient sample is compared to a control.

67. **(Previously presented)** The method of claim 66 wherein the control comprises normal colon, stomach or prostate tissue.

68. **(Currently amended)** The method of claim 66 wherein the level of the expression product in the patient sample ~~is increased~~ differs by at least 200% relative to the control.

69. **(Currently amended)** The method of claim 61 wherein ~~evidence of~~ differential expression is detected by measuring the level of a proteasome component C7-I expression product said expression product comprising a nucleotide sequence at least 95% identical to a sequence selected from the group consisting of SEQ ID NO:150, SEQ ID NO:152, and SEQ ID NO:154 ~~said expression product encoding a polypeptide with threonine endopeptidase activity~~.

70. **(Currently amended)** The method of claim 61 wherein ~~evidence of~~ differential expression is detected by measuring the level of a proteasome component C7-I expression product comprising a nucleotide sequence at least 98% identical to SEQ ID NO:152, ~~said expression product encoding a polypeptide with threonine endopeptidase activity~~.

71. (**Currently amended**) The method of claim 61 wherein ~~evidence of~~ differential expression is detected by measuring the level of a proteasome component C7-I expression product comprising the nucleotide sequence of SEQ ID NO:152.

72. (**Currently amended**) A method of diagnosing colon, stomach or prostate cancer in a patient comprising:

(a) contacting a polynucleotide that hybridizes under highly stringent conditions to the complement of a nucleotide sequence selected from the group consisting of ~~comprising~~ SEQ ID NO:150, SEQ ID NO:152 and SEQ ID NO:154 with nucleic acids of a patient colon, stomach or prostate sample under binding conditions suitable to form a duplex , wherein hybridization is performed at 50°C to 60°C in 5 X SSC (9 mM saline /0.9 mM sodium citrate) ; and

(b) comparing the amount of the duplex formed to the amount of duplex formed when the polynucleotide is contacted with nucleic acids of a non-cancerous colon, stomach or prostate control,

wherein ~~increased levels of~~ a difference of at least 50% in the amount of duplex formed upon contacting said polynucleotide with said nucleic acids of the patient sample compared to the amount of duplex formed upon contacting said polynucleotide ~~and said~~ with the nucleic acids of the non-cancerous control indicates that the patient has colon, stomach or prostate cancer.

Claims 73-74 (**Cancelled**)

75. (**New**) The method of claim 56 wherein the proteasome component C7-I mRNA comprises a nucleotide sequence at least 95% identical to SEQ ID NO:150.

76. (**New**) The method of claim 56 wherein the proteasome component C7-I mRNA comprises a nucleotide sequence at least 98% identical to SEQ ID NO:150.

77. (**New**) The method of claim 56 wherein the proteasome component C7-I mRNA comprises SEQ ID NO:150.

78. (New) The method of claim 61 wherein differential expression is detected by measuring the level of a proteasome component C7-I expression product at least 98% identical to SEQ ID NO:150.

79. (New) The method of claim 61 wherein differential expression is detected by measuring the level of a proteasome component C7-I expression product comprising SEQ ID NO:150.

80. (New) The method of claim 56 wherein the proteasome component C7-I mRNA comprises a nucleotide sequence at least 95% identical to SEQ ID NO:154.

81. (New) The method of claim 56 wherein the proteasome component C7-I mRNA comprises a nucleotide sequence at least 98% identical to SEQ ID NO:154.

82. (New) The method of claim 56 wherein the proteasome component C7-I mRNA comprises SEQ ID NO:154.

83. (New) The method of claim 61 wherein differential expression is detected by measuring the level of a proteasome component C7-I expression product at least 98% identical to SEQ ID NO:154.

84. (New) The method of claim 61 wherein differential expression is detected by measuring the level of a proteasome component C7-I expression product comprising SEQ ID NO:154.

85. (New) The method of any one of claims 57 or 69 wherein the expression product encodes a threonine endopeptidase.

86. (New) The method of any one of claims 49, 56, 61 or 72 wherein the cancer is colon cancer.